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ABSTRACT

Two open plan elementary schools were chosen together with the two traditional schools that most matched in size, location, and socioeconomic backgrounds of pupils; and standardized tests of curiosity and creativity were administered to students in grades 2 and 5. The results of the analyses show that some differences exist on a few of the tests among the four schools, but the differences are not systematic and do not point to any real distinctions among the schools. (Author)

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Studies Of Open Education

No. 7 Curiosity and Creativity Among Pupils in Open Plan and Architecturally Conventional Schools -- A Progress Report

(Reprint of the agenda item C.2.(d)(iii) of the meeting of the Board of Education, 26 March 1973.)

YORK COUNTY BOARD OF EDUCATION

March 1973

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STUDIES OF OPEN EDUCATION

Titles in Series:

No. 1 The Open Plan School as a Response to Change (Jan. 1970)

No. 2 A Day in the Life: Case Studies of Pupils in Open Plan Schools (May 1970)

No. 3 Anatomy of Open Education: A Barebones Summary of Its Assumptions as Related to Practices in Elementary Education and an Overview of Its Accomplishments (revised Sept. 1970)

No. 4 "Open Education: A Selected Bibliography" (revised Oct. 1970)

No. 5 Reading and Mathematics Achievement of Grade 1 Pupils in Open Plan and Architecturally Conventional Schools (Sept. 1971)

No. 6 Reading, Spelling, and Mathematics Achievement of Grade 2 Pupils in Open Plan and Architecturally Conventional Schools (Mar. 1973)

No. 7 Curiosity and Creativity Among Pupils in Open Plan and Architecturally Conventional Schools -- A Progress Report (Mar. 1973)

Research Office

Division of Planning and Development York County Board of Education

YORK COUNTY BOARD OF EDUCATION

STAFF REPORT

CURIOSITY AND CREATIVITY IN "OPEN PLAN" AND "TRADITIONAL" ELEMENTARY SCHOOL -- A PROGRESS REPORT

In 1970 the board authorized a series of studies to discover whether there were differences in the "performance" of pupils in "Open Plan" and more conventionally constructed schools. Among the longitudinal studies which evolved by 1971 was an investigation of curiosity and creativity in pupils in four schools chosen for study.

These studies, the first phases of which are reported on the following pages, are being directed by York University psychologist Dr. Hy. I. Day, a leading authority in this field.

An interim report of the pilot study (1970-71) with grade 5 pupils was made to the York County Board in October 1971. Cost of that project was shared with OISE, the York County Board providing $2,500.

The longitudinal study, beginning with grade 2 in 1971-72, is funded jointly by the Ministry of Education ($18,000) and, in 1972, also by this board ($1,500). Work with this year's grade 3 pupils in the four schools is well advanced.

The Ministry of Education grant for the present funding cycle expires on April 30, 1973. Dr. Day has applied for a renewal of the grant. However, a change in the Ministry's calendar for grants means that funds, if awarded, will not be available to Dr. Day until July 1, 1973.

No specific provision for funding of Dr. Day's work was made in the York County 1973 budget. A general research fund has been proposed in that budget.

RECOMMENDATION

That a sum not to exceed $300 be made available to Dr. Day to permit his team to continue their work with this board in the period May and June 1973.

March 26, 1973.
For further information contact the
Director or Brian Burnham, Research Office.

"CURIOSITY AND CREATIVITY OF GRADE 5 PUPILS IN OPEN PLAN AND OTHER SCHOOLS"

A FINAL REPORT TO THE YORK COUNTY BOARD OF EDUCATION

by Dr. Hy. I. Day
Psychology Department, York University

1. Purpose of Study

Most studies comparing Open Plan and "traditional" schools use criteria of success based on the goals of traditional programs; viz. achievement in academic subjects.

This study attempted to look at differences using two common goals of open education, curiosity, and creativity.

2. Testing Program

Two Open Plan schools, Meadowbrook and Whitchurch Highlands, were chosen together with the two most matched in size, location (urban-suburban and rural) and socio-economic backgrounds of pupils; viz. Maple Leaf and Kettleby. The tests used included the Torrance Tests of Creativity, the Haywood Motivational Preference Inventory, and the Day Test of Specific Curiosity.

Some tests were given to all grade 5 students: (a) group curiosity measures, (b) individual curiosity measures, (c) creativity measures.

Some tests were given to only 12 grade 5 students from each of the four schools: (a) curiosity, (b) creativity.

3. Results and Discussion

Just as no differences are generally found between Open Plan and traditional schools on criteria of success based on academic achievement, differences were not found in curiosity and creativity. See Tables 1 and 2.

We can only speculate on the possible reasons:

(a) No differences actually exist
(b) Differences exist but we have insensitive measures
(c) Other differences, not measured in this study, are more influential than are curiosity and creativity differences
(d) Open Plan schools are not very open plan; traditional schools are not very traditional
(d) Teachers are not necessarily committed to either philosophy and simply teach the only way they know regardless of the title of the school
(e) Many of the students in Open Plan schools may have spent up to four years in traditional schools and so behave like "traditional" students.

TABLE 1

ALL STUDENTS FROM THE FOUR SCHOOLS

1.	Curious personality (TSC)	n.s.*
2.	Curious personality (IM)	n.s.
3.	Eagerness to understand ambiguity	n.s.
4.	Fluency in guessing	Meadowbrook & Kettleby higher
5.	Creative fluency	Maple Leaf highest
6.	Creative flexibility	Maple Leaf highest

* n.s. = no significant difference

TABLE 2

48 STUDENTS CHOSEN AT RANDOM, 12 FROM EACH SCHOOL

A) Curiosity	
- Personality test (TSC)	n.s.
- Personality test (IM)	n.s.
- Desire to experience	n.s.
- Exploration time	n.s.
- Number of questions asked	n.s.
- Type of questions asked	n.s.
B) Creativity	
- Mosaic construction - aesthetic	n.s.
- Mosaic Construction - originality	n.s.
- Story writing quality	Whitchurch & Maple Leaf higher
- Story writing originality	n.s.
- Eagerness to understand ambiguity	n.s.
- Fluency in guessing	Meadowbrook & Kettleby higher
- Creative fluency	Maple Leaf highest
- Creative flexibility	Maple Leaf highest
- Creative originality	Maple Leaf highest
- Creative elaboration	Maple Leaf highest

"CURIOSITY, CREATIVITY, AND ATTITUDE TO SCHOOL OF GRADE 2 PUPILS IN OPEN PLAN AND OTHER SCHOOLS"

AN INTERIM REPORT TO THE YORK COUNTY BOARD OF EDUCATION

by Dr. Hy. I. Day
Psychology Department, York University

1. Purpose of Study

This study was designed to test the effectiveness in fostering the development of curiosity, creativity and a positive attitude towards schooling of two Open Plan schools of the York County Board. It was proposed to follow children in the two schools over three years, starting in grade 2 in 1971-72, and to compare the changes in their test results with those of children in two "traditional" control schools, selected because of their similarity in size and location to the two Open Plan schools.

2. Year I Activity (1971-72)

Data were collected and analysed for 19 measures on 297 pupils in grade 2 in the four participating schools. The scores are from curiosity, creativity, and attitude to school tests administered by Dr. Day and his assistants and from ability and achievement tests administered by school staff under the direction of the Research Coordinator of the York County Board. The children in the four schools were compared and some of the results are appended in Table 1. An analysis of variance of these data was conducted.

The results of the analyses (Table 2) show that some differences exist on a few of the tests among the four schools. But the differences are not systematic and do not point to any real distinctions among the schools. The data will serve as a base-line for analysis of Year II data.

3. Year II Work (1972-73)

We are presently in the process of collecting data from the same students who are presently in grade 3. Similar tests are being administered to those given last year. All students in grade 3 classes in the four schools are being tested, but analysis will be done only of those who were in the same school last year.

It is expected that all the data will be collected by the end of March and analysed during the month of April. A further report comparing changes over one year for the four schools will be submitted later.

A detailed description of the study, including the tests, is available from the Research Office, the York County Board of Education.

March 1973.

TABLE 1

MEANS OF SCORES FOR THE FOUR SCHOOLS TESTED

TEST	Meadowbrook (OPEN Urban)	Whitchurch (OPEN Rural)	Maple Leaf (Trad. Urban)	Kettleby (Trad. Rural)
	N = 99	N = 38	N = 102	N = 49
Mosaics Aesthetic	4.33	5.26	5.71	4.70
Mosaics Originality	3.77	4.24	5.99	4.29
Story Aesthetic	4.73	4.34	4.61	4.45
Story Originality	5.37	4.92	5.43	5.20
Exploration Time	251.	275.	278.	411.
Preference for Complexity	6.81	8.14	7.08	7.21
Preference for Novelty	9.20	10.0	10.4	7.92
Attitude to Schooling	2.18	2.30	1.95	3.96
Ability (IQ)	105.	111.	104.	107.
Mathematics (Achievement)	2.58	3.31	2.80	2.81
Reading (Achievement)	2.87	3.12	2.58	2.81

TABLE 2

F SCORES FOR ALL THE TESTS USED IN THE FOUR SCHOOLS

TEST	Type (Open vs. Trad.)	Location (Urban vs. Rural)	Interaction (Type x Location)
Mosaics Aesthetic	3.77	.039	22.05****
Mosaics Originality	29.42****	8.70****	26.94****
Story Aesthetic	.0004	0.808	0.140
Story Originality	.255	1.01	0.112
Exploration Time	22.01****	20.14****	9.83***
Preference for Complexity	1.23	6.02*	4.07*
Preference for Novelty	.713	2.78	10.42***
Attitude to Schooling	2.27	5.01*	3.98*
Ability (IQ)	1.06	4.00*	0.182
Mathematics (Achievement)	2.86	18.60****	17.55****
Reading (Achievement)	4.71*	3.09	0.0157

* p .05
** p .01
*** p .005
**** p .001